Telehealth and patient-doctor relationships in rural and remote communities

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In Canada, as in many other parts of the world, telehealth is becoming an increasingly common method of facilitating health care delivery, especially for rural and remote communities. Although the definition is still evolving, *telehealth* refers to the provision of health care, health resources, and health education through electronic information and communication technologies. A common and useful way to differentiate between various types of telehealth is to classify the modalities as either synchronous (real time) or asynchronous (store and forward).[1] Synchronous telehealth allows for live interaction between users and includes media such as videoconferencing, while asynchronous forms of telehealth allow for storage and release of information over time and include examples such as medical image sharing or texting. The flexibility of different modes of telehealth to support communication at a distance is especially important for patients in rural and remote communities, where health care access is often inadequate; not only is accessing specialized services challenging, but also receiving holistic, longitudinal generalist care in such communities can be difficult for many residents. In addition to issues of accessibility, the effectiveness of care is built on a foundation of a strong therapeutic relationship between patient and physician. The diversity and quality of modern telehealth modalities has the potential to not only provide access, but also actually improve the ways that generalist care providers connect with their rural and remote patients; this relationship no longer has to be established and enhanced only through face-to-face interaction.

The importance of a positive patient-doctor relationship is undeniable. When patients and physicians have the chance to develop a familiarity with each other over time, care improves because it becomes more tailored to the individual, and patient satisfaction increases accordingly.[2] The result is a therapeutic relationship with stronger communication, more effective patient education, greater trust and patient disclosure, increased patient compliance, and better health outcomes.[3,4] Consequently, the existing research into what generates an effective patient-doctor relationship is vast, but it can be condensed into several key determinants. The physician's approach can be first divided into 2 components: emotional care and cognitive or informational care.[5] Emotional care entails efforts to develop mutual trust, express empathy, exchange respect, convey warmth, and employ other similar practices that fulfil the emotional needs of patients, and much of this is communicated nonverbally. Informational care involves activities like medical information gathering, patient education, and management of health outcome expectations.[6] These communication goals are intertwined and mutually interreliant, and together can be achieved through clear and respectful communication, active and facilitative listening, collaboration with patients in their management and treatment, acknowledgment of patient values and ideas, and continuity of care.[7]

Accordingly, achieving a strong patient-doctor relationship comes from both verbal and nonverbal modes of communication. However, because emotional exchange plays such a prominent role in developing this relationship, it is not surprising that nonverbal forms of communication play a moderately larger role.[8] A physician who can connect with patients both verbally and nonverbally will generate the kind of positive therapeutic relationship that optimizes whole-person care and patient satisfaction.[9] A review of the literature identifies 9 main forms of nonverbal communication that are important for developing and maintaining this relationship: strong eye contact, awareness of voice intonation, respectful touch for both social and diagnostic purposes, assuring body posture and gestures, emotional expressiveness and perceptiveness, professional appearance, appropriate use of physical space, facilitative conversational behaviour, and effective time management.[9] Most of these communication mechanisms can be conveyed through telehealth connections.

Means to connect

Modern telehealth technologies are rapidly increasing in quality, accessibility, and popularity. These technologies have immense potential to facilitate relationship building in clinical practice between patients, their generalist practitioners, and specialist consultants. Synchronous modalities give the advantage of immediate, clear, and accurate communication in real time. Key forms include telephone and audioconferencing, live biosignal monitoring, interactive robotic equipment, and

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videoconferencing. Of these, videoconferencing is quickly becoming the primary synchronous modality because it allows for the exchange of both verbal and nonverbal cues in virtual encounters, thereby facilitating most of the key determinants of normal patient-doctor relationships. In fact, it allows for 7 of the 9 overarching forms of nonverbal communication, with touch and physical closeness being the only exceptions. In addition, videoconferencing allows patients to connect with a physician in the comfort and convenience of their own community without some of the traditional stresses of traveling for visits, meaning that rural patients can focus on their clinical encounter within a familiar and supportive environment.

Asynchronous telehealth modalities also foster relationships by allowing the recording, storage, and forwarding of digital information at the convenience of the users without both parties needing to be present simultaneously. Asynchronous forms include audio and video recordings, medical image sharing, biosignal collection, e-mail, texting, and instant messaging. While all are important clinically, the modalities with the greatest potential for building therapeutic relationships are e-mail, texting, and instant messaging because of their widespread use. Texting has especially become the primary method of communicating since the advent of mobile devices, specifically among today's generation of youth. It thus presents an opportunity for physicians to interact with patients in the way that is most comfortable and familiar for patients, whether it is for patient education, treatment monitoring, or connecting relationally. Instant messaging (which can also be used synchronously) is becoming a similarly used tool among the general public through applications like WhatsApp, Messenger, Google Hangouts, and iMessage. In this context, where the communication medium is familiar, clinicians have even found that sometimes patients will be more willing to divulge sensitive information than they would in a face-to-face encounter.[10]

While these evolving technologies affect the way we think about modern health care delivery in general, the potential implications of telehealth communication for relationship building are substantial in rural and remote communities. In Canada, many of those living in these areas continue to lack access to much-needed health services and often have to travel far to get even basic generalist care. So what are the implications for the patient-doctor relationship when technology arrives on the stage? The truth is, we do not exactly know; there is a dearth of research surrounding this question. Ironically, it is in the context of generalist care that a strong patient-doctor relationship is especially important for essential holistic care.

Anecdotally we know that telehealth can be used to help build and sustain these critical relationships. For example, co-author Dr John Pawlovich, and other physicians like him, supports patient populations in 5 remote northern aboriginal communities through a range of telehealth modalities and regular monthly in-person visits.[11] Similarly, the First Nations Health Authority in BC has been implementing a Telehealth Expansion Project since 2006, based on research and successful experience, which seeks to provide health care access to underserved First Nations communities across BC.[12] Across the country, other successful telehealth initiatives are also servicing patients with diverse needs as evidenced by examples like the Saskatoon-based Rural and Remote Memory Clinic described by Morgan et al,[13] which incorporates telehealth into assessments and follow-up, and the Ontario Telemedicine Network's Telehomecare program, which helps patients to remotely manage their chronic diseases in partnership with their health care team.[14] The desired end point of efforts like these is that an array of communication methods will allow physicians to meet their patients living in rural and remote areas, provide timely access to care, and foster enriched relationships, and do so in a way that respects the cultural context of the patient. (For example, in many aboriginal communities in Canada, it is not customary to maintain eye contact.)

Strengthening relationships

In the past few years there has been some trepidation accompanying telehealth expansion owing to uncertainties about how much the virtual nature of the interaction might affect delivery of care and the patient-doctor relationship. Three especially important challenges continue to be subjected to examination and improvement by many providers who use telehealth: the creation of sufficient infrastructure, the assurance of robust privacy, and the provision of funding. However, despite these existing issues, there is ongoing evidence that telehealth is a highly useful, efficient, popular, and timely communication method that is already enhancing regular clinical and relational care by physicians. It is clear that the inclusion of telehealth will make the patient-physician relationship better. Text messages, instant messages, e-mail communications, etc, have replaced telephone conversations for the daily back and forth between patients and health care providers.

Telehealth involves a range of tools that are each optimally useful in different settings and should accordingly be selected when most applicable. Ultimately, the goal is to bring people closer together when they are geographically separated. Enhanced timely access to high-quality generalist services, improved outcomes and experiences for patients, and enriched relationships between all stakeholders are some important end points that coincide with the goals of the Triple Aim Initiative.[15] Ideally telehealth modalities will be incorporated

collectively into a holistic, multi-dimensional, patient-centred communication strategy. The relationship between technology and medicine is evolving. As we think about the future, it actually becomes difficult to envision a health care system without telehealth modalities used to support patient-centred care and enhanced relationships.

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Competing interests
None declared

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